

# Human Health

symbol		Lethal	Irreversible damage	Repeated exposure	
<b>T+</b>	<b>very toxic</b>	Very toxic R-	Very Toxic R-39/		
		LD50/LC50	R-phr	Dose	R-phr
		oral ≤ 25 mg/kg 28	oral ≤ 25 mg/kg 39/28		
		dermal (rat/rabbit) ≤ 50 mg/kg 27	dermal (rat/rabbit) ≤ 50 mg/kg 39/27		
inhalation aerosol ≤ 250 mg/m <sup>3</sup> /4 hr 26	inhalation aerosol ≤ 250 mg/m <sup>3</sup> /4 hr 39/26				
inhalation gas/vapor ≤ 500 mg/m <sup>3</sup> /4 hr 26	inhalation gas/vapor ≤ 500 mg/m <sup>3</sup> /4 hr 39/26				
<b>T</b>	<b>toxic</b>	Toxic R-	Toxic R-39/	Toxic repeated R-48/	
		LD50/LC50	R-phr	repeated dose	R-phr
		oral 25-200 mg/kg 25	oral 25-200 mg/kg 39/25	oral < 5 mg/kg/dag 48/25	
		dermal (rat/rabbit) 50-400 mg/kg 24	dermal (rat/rabbit) 50-400 mg/kg 39/24	dermal (rat/rabbit) < 10 mg/kg/dag 48/24	
inhalation aerosol 250-1000 mg/m <sup>3</sup> /4 hr 23	inhalation aerosol 250-1000 mg/m <sup>3</sup> /4 hr 39/23	inhalation < 25 mg/m <sup>3</sup> 6 hr/d 48/23			
inhalation gas/vapor 500-2000 mg/m <sup>3</sup> /4 hr 23	inhalation gas/vapor 500-2000 mg/m <sup>3</sup> /4 hr 39/23				
<b>Xn</b>	<b>harmful</b>	Harmful R-	Harmful R-68/	Harmful repeated R-48/	
		LD50/LC50	R-phr	repeated dose	R-phr
		oral 200-2000 mg/kg 22	oral 200-2000 mg/kg 68/22	oral 5-50 mg/kg/dag 48/22	
		dermal (rat/rabbit) 400-2000 mg/kg 21	dermal (rat/rabbit) 400-2000 mg/kg 68/21	dermal (rat/rabbit) 10-100 mg/kg/dag 48/21	
inhalation aerosol 1000-5000 mg/m <sup>3</sup> /4 hr 20	inhalation aerosol 1000-5000 mg/m <sup>3</sup> /4 hr 68/20	inhalation 25-250 mg/m <sup>3</sup> 6 h/d 48/20			
inhalation gas/vapor 2000-20000 mg/m <sup>3</sup> /4 hr 20	inhalation gas/vapor 2000-20000 mg/m <sup>3</sup> /4 hr 68/20				
<b>-</b>	<b>in between</b>	the space between C&L LD50/LC50 harmful and Annex IV LD0/LC0	the space between C&L irriverisble damage and Annex IV clinical signs		
		LD50/LC50 -->LD0/LC0	Dose	repeated dose	
		brío01 2000-5000 mg/kg	oral >2000 mg/kg	oral 50-500 mg/kg/dag	
		dermal (rat/rabbit) 2000-5000 mg/kg	dermal (rat/rabbit) >2000 mg/kg	dermal (rat/rabbit) 100-1000 mg/kg/dag	
inhalation aerosol 5000-12500 mg/m <sup>3</sup> /4 hr	inhalation aerosol >5000 mg/m <sup>3</sup> /4 hr	inhalation 250-2500 mg/m <sup>3</sup> 6 h/d			
inhalation gas/vapor 20000-50000 mg/m <sup>3</sup> /4 hr	inhalation gas/vapor >20000 mg/m <sup>3</sup> /4 hr				
<b>Annex IV</b>	<b>minimal risk</b>	clinical signs	clinical signs		
		LD0/LC0	Dose	repeated dose	
		oral >5000 mg/kg	oral >2000 mg/kg	oral ≥500 mg/kg/dag	
		dermal (rat/rabbit) >5000 mg/kg	dermal (rat/rabbit) >2000 mg/kg	dermal (rat/rabbit) >1000 mg/kg/dag	
inhalation aerosol >12500 mg/m <sup>3</sup> /4 hr	inhalation aerosol >5000 mg/m <sup>3</sup> /4 hr	inhalation >2500 mg/m <sup>3</sup> 6 h/d			
inhalation gas/vapor >50000 mg/m <sup>3</sup> /4 hr	inhalation gas/vapor >20000 mg/m <sup>3</sup> /4 hr				

# Ecotoxicity Environmental Fate

symbol			in addition
<b>N</b>	<b>very toxic</b>	Very toxic to aquatic organisms aquatic toxicity (short term) (fish, Daphnia, algae) $EC_{50} \text{ or } LC_{50} \leq 1 \text{ mg/l}$	May cause long-term adverse effects in the aquatic environment N, R50 not readily biodegradable OR $\log Pow \geq 3$ , unless $BCF < 100$ N, R50/R53
-	<b>toxic</b>	Toxic to aquatic organisms aquatic toxicity (short term) (fish, Daphnia, algae) $1 \text{ mg/l} < EC_{50} \leq 10 \text{ mg/l}$	May cause long-term adverse effects in the aquatic environment R51/R53 not readily biodegradable OR $\log Pow \geq 3$ , unless $BCF_{exp.} < 100$
-	<b>harmful</b>	Harmful to aquatic organisms aquatic toxicity (short term) (fish, Daphnia, algae) $10 \text{ mg/l} < EC_{50} \leq 100 \text{ mg/l}$	May cause long-term adverse effects in the aquatic environment R52/R53 not readily biodegradable OR $\log Pow \geq 3$ , unless $BCF_{exp.} < 100$
-	<b>in between</b>	aquatic toxicity (short term) (fish, Daphnia, algae) $100 \text{ mg/l} < EC_{50} < 1000 \text{ mg/l}$	$10 < BCF_{exp.} < 100$ OR $2 < \log Pow \leq 3$
<b>Annex IV</b>	<b>minimal risk</b>	Not classified or aquatic toxicity (short term) (fish, Daphnia, algae) $EC_{50} > 1000 \text{ mg/l}$ or $EC_{50} \text{ (extrapolated)} > \text{water solubility}$ or $EC(50) > 100 \text{ mg/l}$ AND validated QSAR showing $> 1000 \text{ mg/l}$ AND chronic long-term NOEC $> 10 \text{ mg/l}$ terrestrial toxicity no adverse effects in any of tests required under Annex IX at max conc. tested Not meeting any of PBT criteria or on PBT working group list Not suspected or identified as having endocrine activity No ozone depletion (Annex I of EC2037/2000)	readily biodegradable AND $BCF_{exp.} < 10$ OR $\log Pow \leq 2$